contains helical grooves, the other face contains a plurality of crescent-shaped grooves, each having a buffer gas supply opening adjacent the ends of the crescent grooves and each opening communicating with a smaller diameter buffer gas supply bore. The amendments find basis in the original claims 1 and 4 and in the drawings and related description in the Specification. Claims 4-9 have been cancelled and Claim 10 has been added.

The claimed device having a set of widened buffer gas supply openings in each end of the crescent-shaped grooves provides more efficient distribution of the buffer gas into the interface gap and better contains the toxic gas within the process and prevents leakage of the toxic process gas into the atmosphere.

The device is specially suited for a new generation of portable power station stations driven by a steam turbine through the means of a contained cycle inorganic gas medium, which is heated up by grab wood or other inexpensive combustible waste source. The heated medium expands and drives a turbine with generator. The turbine is extremely efficient as the pressure differential goes as low as 0.1 bar. The medium is very expensive and therefore no leakage is allowed. Above device is best suited for the application of the sealing system of the invention.

The invention is not disclosed nor rendered obvious by the cited references.

Claims 1-3 and 7-9 are rejected as anticipated by Wu, et al.

Though Wu, et al. discloses sealing a helical groove interface with a buffer fluid, the main purpose of Wu, et al. is to regulate the gap width by changing the buffer gas pressure at lower shaft speeds. He does not disclose minimizing leakage of process gas by positioning wide buffer gas supply openings adjacent each end of crescent-shaped grooves on a face opposed to a helical-grooved face.

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Claims 4-6 are rejected as being obvious over Wu, et al. in view of Faurve. Though Faurve may disclose crescent-shaped pockets, he does not disclose the widened buffer gas openings positioned adjacent the ends of the crescent-shaped grooves.

The incidentally cited references have been reviewed and are believed to be less relevant than the references applied to reject the claims.

For the above reasons this application is believed to be in condition for allowance and such action at an early date is respectfully solicited.

Respectfully submitted,

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